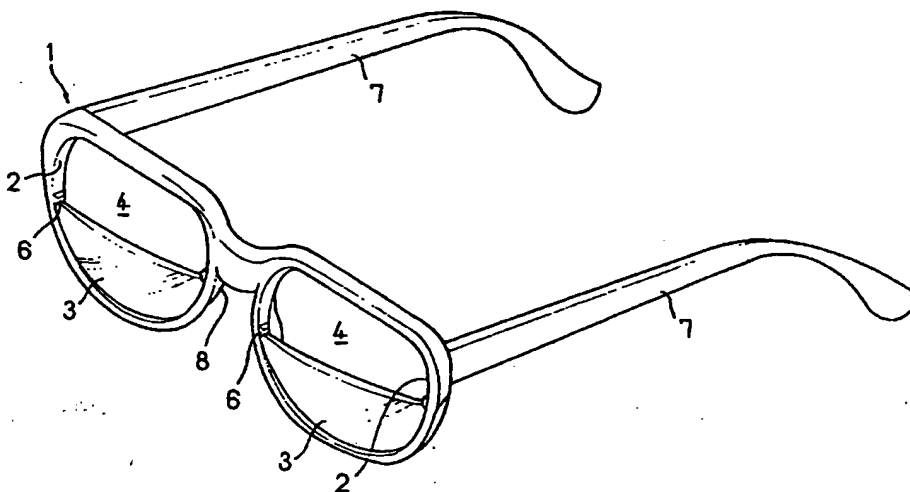




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<b>(21) International Application Number:</b> PCT/KR94/00012 <b>(22) International Filing Date:</b> 21 February 1994 (21.02.94) <b>(30) Priority Data:</b> 1993-3399      8 March 1993 (08.03.93)      KR <b>(71)(72) Applicant and Inventor:</b> HWANG, Yeol [KR/KR]; 616-4, Magok-ri, Hasung-myon, Kimpo-gun, Kyonggi 415-880 (KR). <b>(74) Agent:</b> CHOI, In, Sool; 17-4, 4-ga Namdaemun-ro, Chung-gu, Seoul 100-094 (KR).		<b>(81) Designated States:</b> AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KZ, LK, LV, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>

(54) Title: HALF LENS SPECTACLES FOR THE AGED



## (57) Abstract

The present invention relates to the spectacles for the aged fitted halves lens in their rims, wherein the inner spaces (2, 2') of rims of the conventional spectacles are divided into the upper and the lower spaces, in any one spaces thereof halves lenses (3) are fitted, the remaining other empty spaces (4) are left as they are so as to see objects as needed through either said lenses (3) of the empty spaces (4) by wearing always. Said spectacles for the aged fitted halves lens in their rims of the present invention have features which for resolving defect of conventional spectacles for the aged such as inconvenience in use and carrying along, fatigue of eyes and decrease of eyesight, in halves parts of rims of spectacles halves lenses (6) are fitted, other halves empty parts (4) are left as they are so that the user can see objects clearly not to mention of far and near distance, can prevent fatigue of eyes and can resolve many inconveniences caused by only lens.

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## HALF LENS SPECTACLES FOR THE AGED

### Technical Field

The present invention relates to spectacles for the aged fitted halves lens in its rim that inner spaces for fitting lens  
5 in the conventional rim for spectacles are divided into the upper half space and the lower half space, in any one of both spaces halves lens for spectacles are fitted and the remaining halves spaces are left as they are, i.e. empty space. The spectacles of the present invention are to complement weak  
10 eyesight of presbyopias by means of putting on it because a wearer can take a look optionally through either the fitted lens or empty space left in the rim of the spectacles.

### Background Art

Since the crystalline lenses of human's eyes are aged  
15 relative to advancing in age, its elasticity and refractive index are reduced, thus the focal distance thereof according to far and near is not regulated harmoniously and as a result the eyes result in presbyopia.

In case of presbyopia which can have a good look objects  
20 of far distance, it cannot take a good look that of near distance, while in case of presbyopia which can have a good look at that of near distance, it cannot take a good look at that of far distance.

For resolution of such a problem development of various type  
25 of spectacles for the aged have been attempted. However their wearer put on it only in necessary case and then had to take off it in case of unnecessary.

Therefore their wearers felt inconvenience.

When behind the inner surface of conventional spectacles a  
30 magnifier is put to see through them, their application is not only well but also the wearer should always carry the magnifier together with spectacles during going out.

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Therefore, the separate magnifier causes the wearers inconvenience to use it.

In addition, in case that lower part of lens of spectacles is made in the form of a magnifier, a wearer can take a look at objects of far distance by means of conventional upper part of the spectacles lens and can take a look at an object of near distance by means of the lower magnifiers thereof. However in this case, as the wearer should take a look at, through conventional lens, far distance capable of seeing with eyes directly, probably the visibility will be reduced. Accordingly eyes of the wearer can be fatigued easily.

Furthermore, said conventional spectacles have defect which if on the surface of lens layers of frost are formed by means of sudden change of temperature in winter, it loses its function as spectacles.

### Disclosure of Invention

It is an objection of the present invention that it is to provide spectacles for the aged which can take a look at objects clearly not to mention of far or near distance, can be used conveniently and can prevent fatigue of eyes.

The present invention relates to spectacles for the aged characterized in that inner spaces of rims of the glasses are divided into upper spaces and lower spaces by forming projections for hanging lens on inner side of rims corresponding to the phantom dividing lines of said inner spaces, in any one side spaces of said divided upper and lower spaces in the rim halves lenses corresponding to the spaces thereof are fitted, the remaining halves spaces of other side are left as they are, i.e. as empty spaces.

If humans having presbyopias which can take a look well far distance but cannot take a look well near distance intend to use the spectacles of the present invention, convex lenses are fitted in the lower spaces thereof so as to see well near distance, and on the contrary if humans having presbyopias which

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can take a look well near distance but cannot take a look well far distance intend to use the spectacles of the present invention, concave lenses are fitted in the upper of the spectacles so as to see well far distance.

5 Said spectacles of the present invention have a merit capable of seeing objects clearly not to mention of far or near distance preventing fatigue of eyes and resolving inconvenience problems caused by lens.

### Brief Description of Drawings

10 Figure 1 represents a perspective view of spectacles of the present invention.

Figure 2 represents a sectional view showing state using spectacles of the present invention.

Figure 3 represents a perspective view of other example of 15 spectacles of the present invention.

Figure 4 represents a sectional view showing state using spectacles of Figure 3.

### Mode for Carrying out the Invention

Now referring to accompanying drawings the present invention 20 will be described in detail below.

In conventional rims 1 of spectacles, inner spaces 2,2' for fitting lens of said rims 1 are divided into the upper spaces and the lower spaces by means of forming projections 6,6' for hanging lens on inner side of rims positioned in the phantom 25 dividing lines of said spaces 2,2' and in only any one side spaces of said upper and lower spaces a half lenses corresponding to the spaces are fitted, the remaining other empty space are left as they are, i.e. as the empty spaces 4,4'.

Referring to Figure 1, in the lower spaces of said inner 30 spaces 2,2' for fitting lens halves magnifiers 3,3' of type corresponding to the spaces are fitted, the upper spaces of said inner spaces 2,2' are left as the empty spaces 4,4'.

Referring to Figure 3, in the upper spaces of said inner

spaces 2,2' for fitting lens halves concave lens 5,5' of type corresponding to the spaces are fitted, the lower spaces thereof are left as the empty spaces 4,4'.

Since a rim(frame) 1 of the spectacles for the aged of  
5 the present invention described above is identical to that of the conventional spectacles, it can be manufactured easily and also the spectacles of the present invention can be always weared by the humans having presbyopias without repeats of putting on and taking off them as in conventional magnifier.

10 If humans having presbyopias which can take a look well far distance but cannot take a look well near distance intends to use the spectacles of the present invention, by wearing spectacles for the aged as shown in Figure 1, which halves magnifiers 3,3' are fitted only in the lower space and the empty spaces 4,4'  
15 are formed in the upper spaces, as shown in Figure 2 the wearer can see clearly objects such as a tree 9 of far distance through the empty spaces without lens so that fatigue of eyes can be reduced, also when he wishes to see objects of near distance such as a book 10 or a newspaper he can see clearly  
20 and easily through the lower magnifier 3 without taking off spectacles.

While in case humans having a presbyopia can take a look well near distance but cannot take a look well far distance, by wearing spectacles for the aged as shown in Figure 3, which  
25 halves concave lenses 5,5' are fitted only in the upper space and in the lower space the empty spaces 4,4' are formed, as shown in Figure 4 the far distance can be taken a look through said concave lens 5 and the near distance can be taken a look clearly through the empty space 4, without fatigue of eyes and  
30 not to mention of far or near distance.

Furthermore, as spectacles of the present invention have the empty spaces 4,4' fatigue of eyes is reduced, the weares can see objects directly and clearly as discribed above as well as in the empty space 4,4' layers of frost cannot be formed in  
35 spite of sudden change of temperature in winter, although rain or

snow falls the wearer does not undergo inconvenience caused by humidity adhered on lens and also weight of the spectacles also can be reduced by fitting halves lens.

5 In addition, since in rims positioned in phantom dividing lines of spectacles of the present invention the projections 6,6' are formed, halves lenses 3,3' or 5,5' can be fitted fixedly in halves spaces of inner spaces 2,2' of the rims by said projections 6,6'.

### Industrial Applicability

10 As the above-mentioned spectacles for the aged formed with halves lens of the present invention are made in the form identical to rims of conventional spectacles, a process for manufacturing it is not different from the conventional process and thus its manufacture is very easily.

15 Furthermore, as the spectacles comprise the halves lens and the halves empty spaces, the users can wear always them and can take a look clearly objects as needed through said lens or the empty spaces without fatigue of eyes.

## CLAIMES

What is claimed is:

1. In conventional rims of spectacles, spectacles for the aged fitted halves lens in their rims characterized by dividing inner spaces for fitting lens of said rims into the upper spaces and the lower spaces by means of phantom dividing lines, by fitting, in any one spaces of said upper and lower spaces, halves lenses of type identical to said selected spaces and by leaving the remaining other spaces as the empty spaces.
2. The spectacles for the aged fitted halves lens in their rims in accordance with claim 1, wherein on the inner side of the rims positioned in said phantom dividing lines of the inner spaces of the rims projections for hanging lens are formed.
3. The spectacles for the aged fitted halves lens in their rims in accordance with claim 1, wherein of the inner spaces of said rims, in the lower spaces, halves magnifiers corresponding to said lower spaces are fitted, the remaining other halves empty spaces are left as they are.
4. The spectacles for the aged fitted halves lens in their rims in accordance with claim 1, wherein of the inner spaces of said rims, in the upper spaces, halves concave lenses corresponding to said upper spaces are fitted, the remaining other halves empty spaces are left as they are.



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FIG. 1

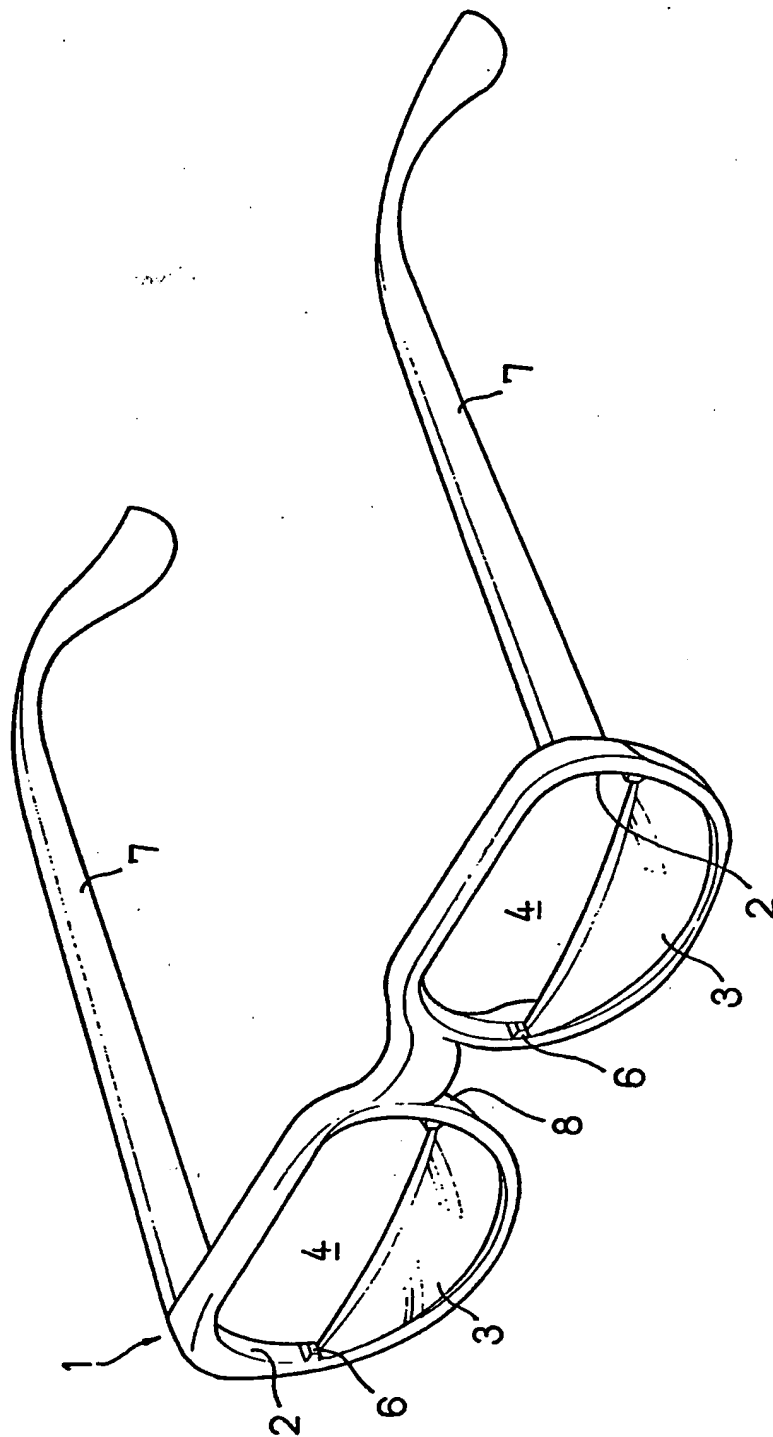


FIG. 2

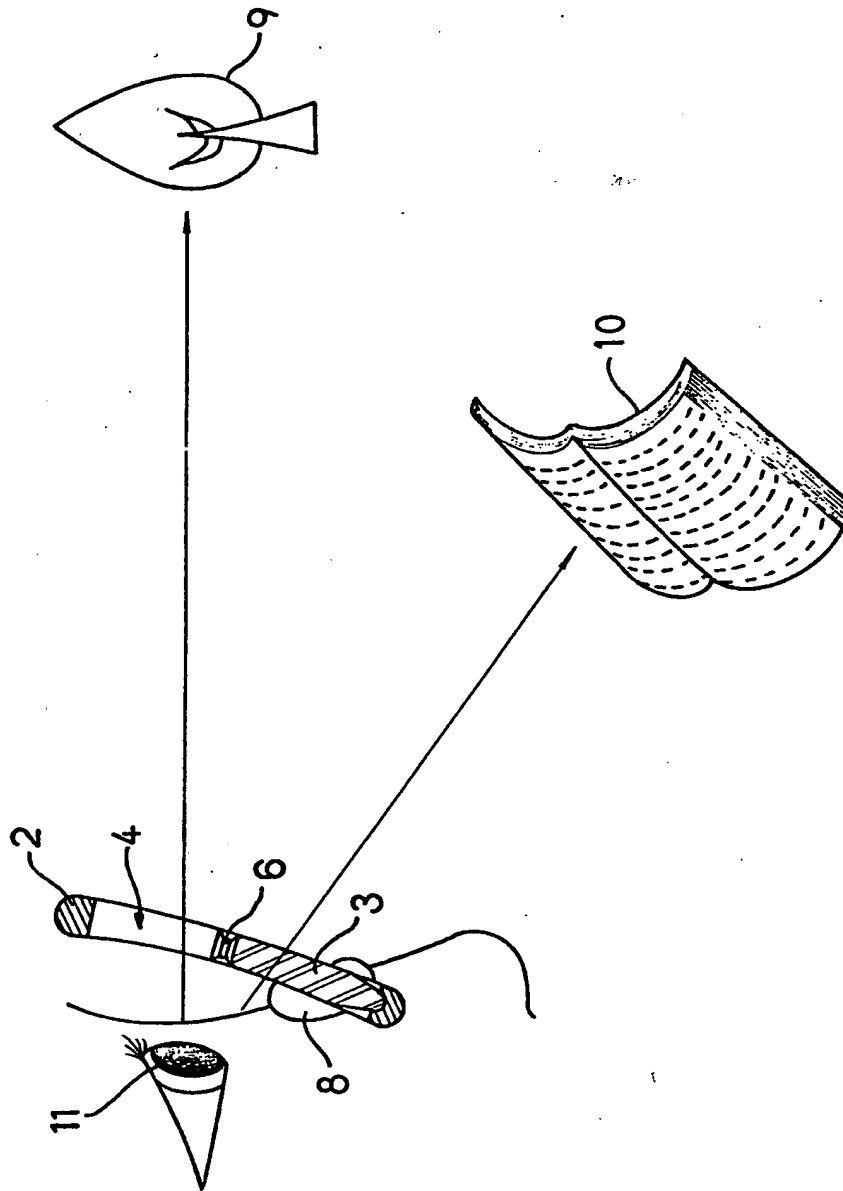


FIG. 3

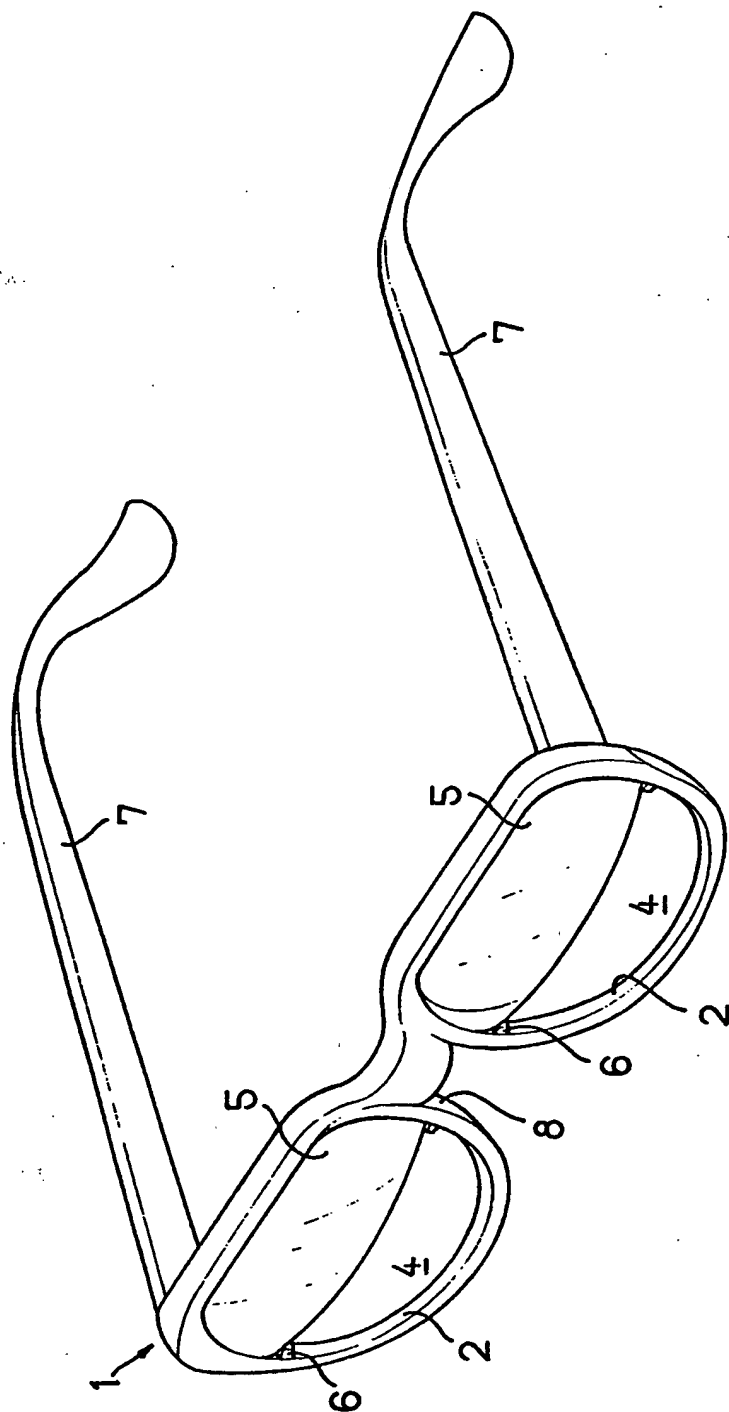
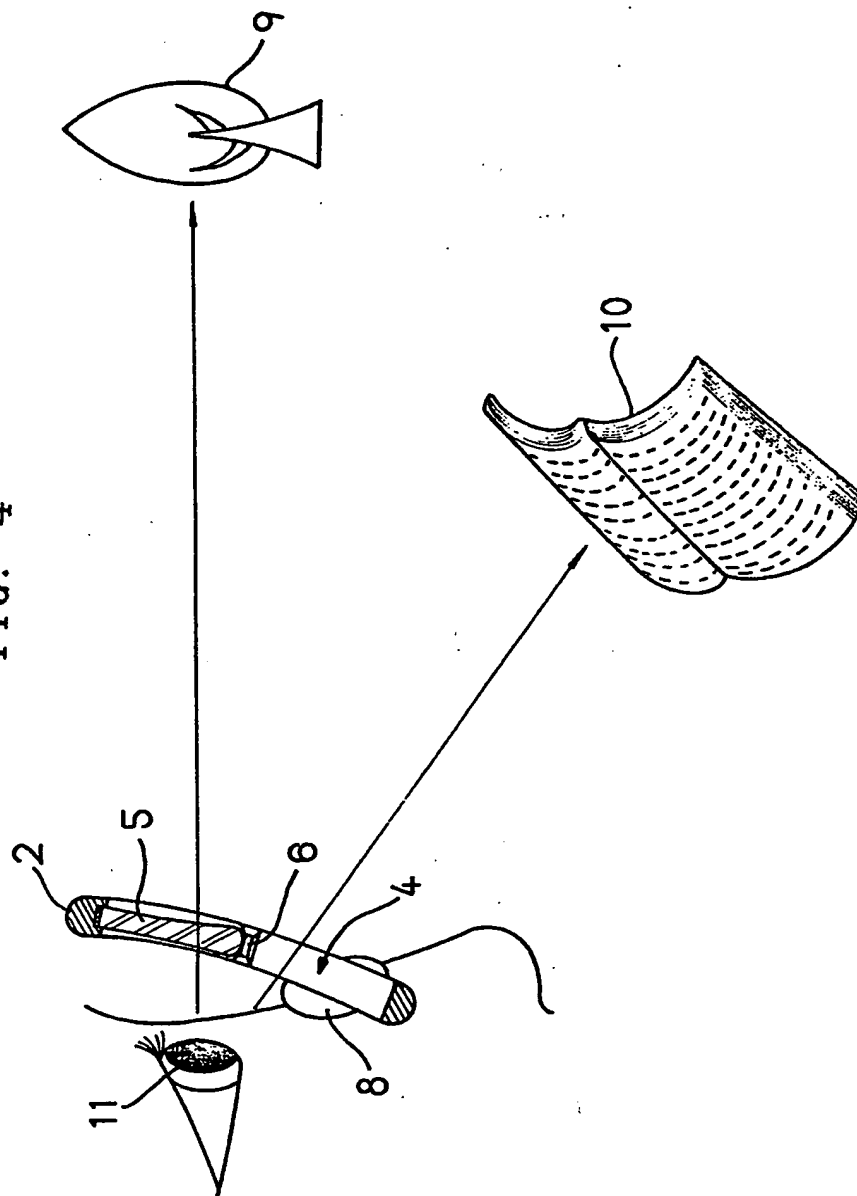


FIG. 4



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR 94/00012

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>5</sup>: G 02 C 7/02, 7/06

According to International Patent Classification (IPC) or to both national classification and IPC

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IPC<sup>5</sup>: G 02 C 7/00, 7/02, 7/06, 7/08

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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	GB, A, 689 997 (N.W. CHAPPELL) 08 April 1953 (08.04.53), figs. 3,4.	1,3 2,4
Y	US, A, 3 425 774 (F.W. LINDBLOM) 04 February 1969 (04.02.69), figs. 1-3.	2
Y	FR, A1, 2 530 349 (M.T. HUTET et al.) 20 January 1984 (20.01.84), page 1, lines 4-40.	4
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☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search

02 May 1994 (02.05.94)

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GB A 689997		keine - none - rien	
US A 3425774	04-02-69	keine - none - rien	
FR A1 2530349	20-01-84	keine - none - rien	